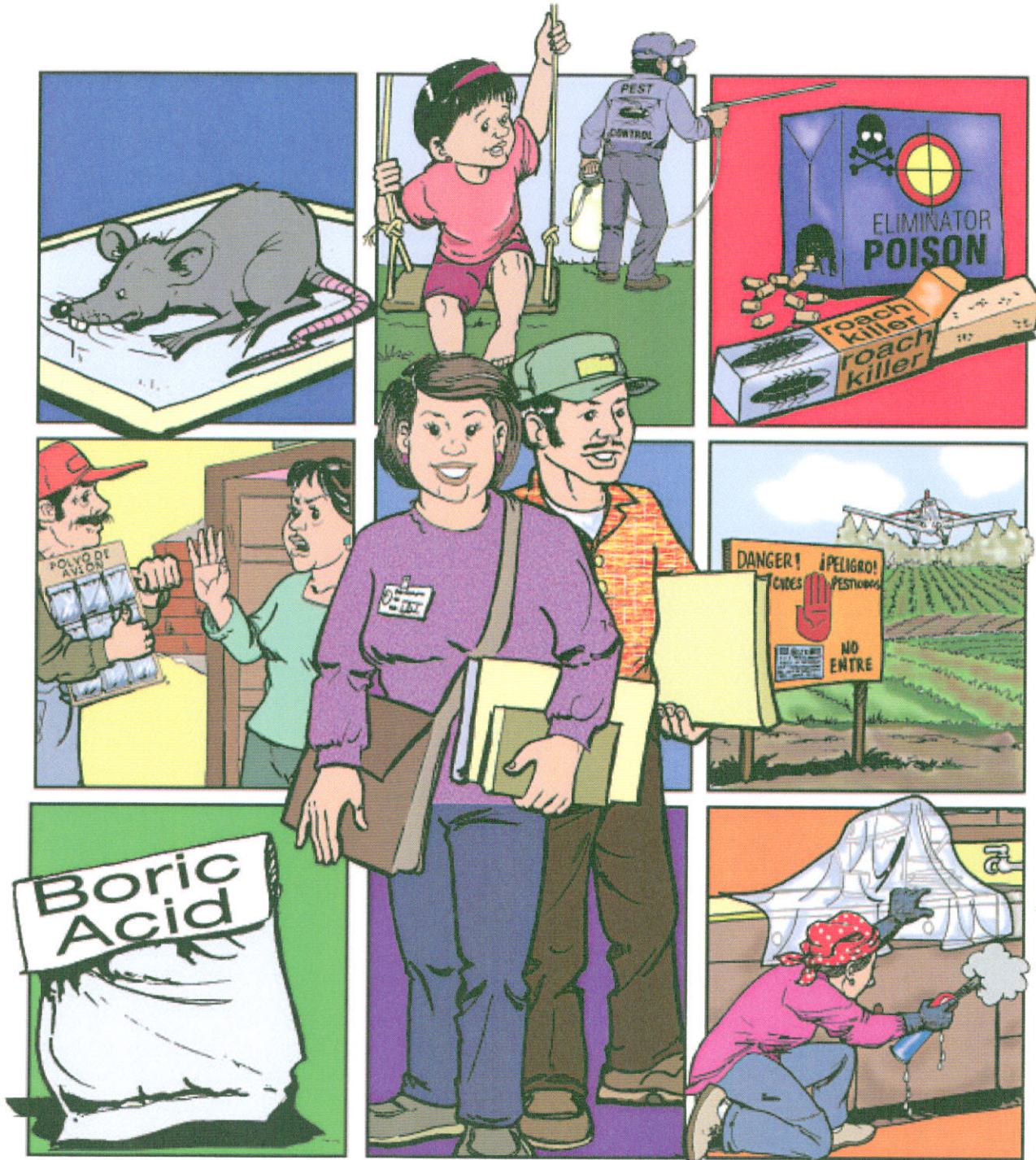


A LITTLE BIT OF POISON... WILL IT KILL YOU?



A Pesticide
Education Manual
for Community
Health Workers and
Promotores de Salud



A LITTLE BIT OF POISON...WILL IT KILL YOU?

A Pesticide Education Manual for Community Health Workers and Promotores de Salud



This manual is a guide for lay health educators or *promotores de salud* to assist them with community-based pesticide education activities. The manual offers information about health risks from pesticide exposure and ways to lessen these risks. Also, it includes useful information and tips to successfully work in the community.

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TALKING ABOUT PESTICIDES IN THE COMMUNITY

What is a health promoter?

A health promoter is a person who likes to learn in order to help others learn so together they may improve their health, their family's health and the health of their community. A health promoter is a community educator. A promoter often has the following characteristics:

✓ Lives or belongs to the community where he or she works.

✓ Knows the neighborhood or community.

✓ Identifies with the people or neighbors in the community.

✓ Knows the services available in the community.

✓ Is honest.

✓ Has a strong commitment to the wellbeing of the community.



✓ Wants to learn in order to help others learn and improve conditions in the community.

✓ Knows how to listen and talk objectively.

✓ Looks out for the community's wellbeing.

✓ Is kind and humble.

✓ Recognizes families' concerns.

✓ Admits when he or she does not know or does not have the information.

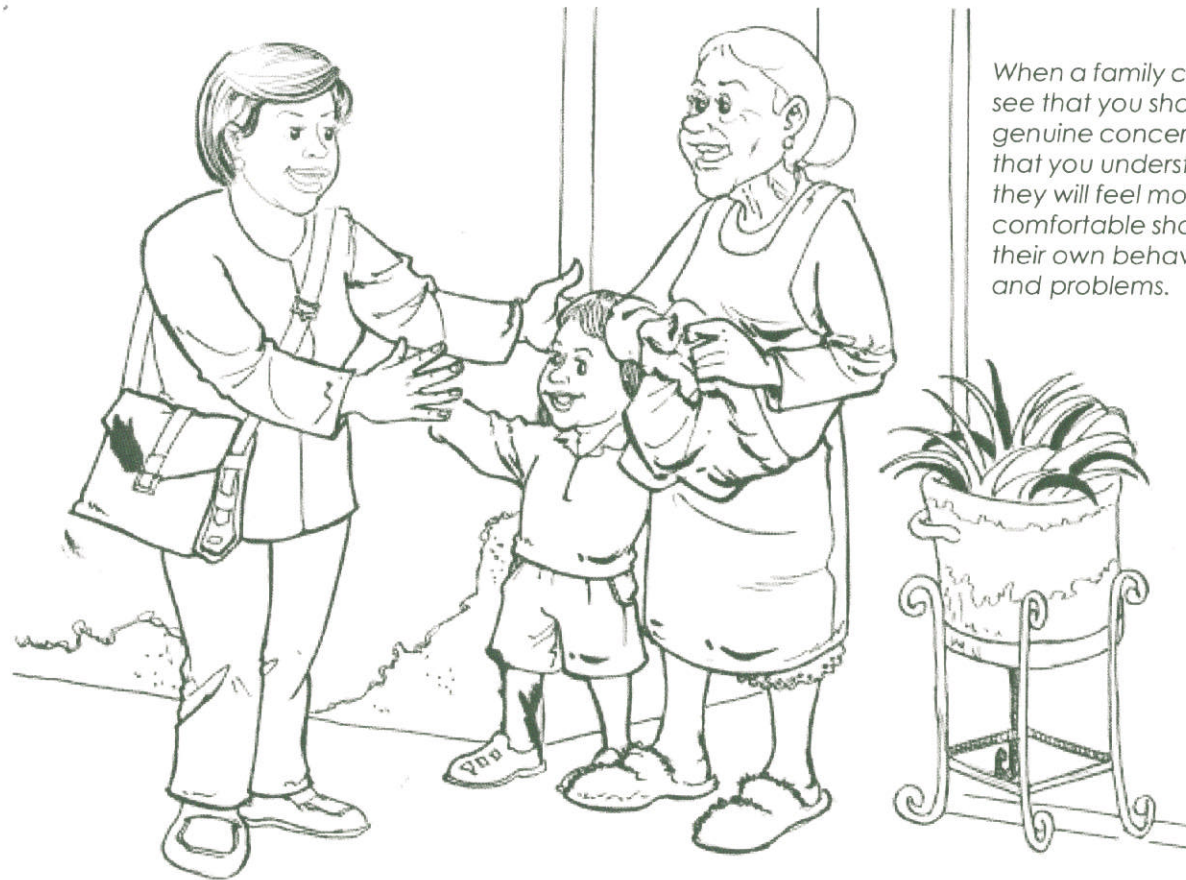
To be a promoter it is not necessary to know everything or to be an "expert". What is important is the desire to learn and to share the knowledge with others to improve the quality of life of people in the community.

And it is not necessary to have a lot of formal schooling or education. A promoter does not have to have a high school diploma or a college degree. A promoter simply has to be willing to learn and to share knowledge.

How do I build trust with people I am working with?

It is important that the family or the person with whom you are speaking trusts you. (From now on we will use the term **family** to make it easier.) Building trust is not simple. Sometimes it takes more time and effort than you think. Here are some tips to help you build trust:

- ✓ Listen carefully and choose the best way to share information and knowledge with the family.
- ✓ Clear up any misunderstandings and myths in a respectful way.
- ✓ Introduce yourself as a person who wants to learn and share with the community, not as a person who knows everything and has only come to teach or inform.
- ✓ Be open and honest about the reason for your visit and how the family and the entire community will benefit.
- ✓ Avoid singling out the family or household you are speaking with. It is more helpful to talk about the community in general.
- ✓ Acknowledge the concerns about other families or the community, but do not join in any criticisms.



When a family can see that you share genuine concern or that you understand, they will feel more comfortable sharing their own behaviors and problems.

How do I get started in the community?

Once you have established trust, you may begin to share knowledge about pesticides using **active communication**. This means that you must listen carefully and choose the best way to work with the family. Give them enough time to make them feel comfortable. Be thoughtful and respond to their questions even if they ask about topics other than pesticides.



Your first contact with the family sets the stage for your future relationship with them. Here are some important steps to start your relationship off on the right foot:

- ✓ Introduce yourself—give your name, a brief explanation of your organization and where you come from.
- ✓ Clearly explain the reason for your visit.
- ✓ Enter the home only if you are invited.
- ✓ Talk about things you have in common like children, school, church or neighborhood.
- ✓ Wait until the family feels comfortable to start giving them information.
- ✓ Use simple words and explain terms as needed.
- ✓ Take your time; there is no need to rush. Take enough time so that the family feels comfortable with you.
- ✓ Ask if this is a good time talk. Offer another time to visit if the family or person can't talk to you.
- ✓ Avoid talking too long about personal things and/or complaints.

There may be times when the family may be ashamed or embarrassed about the conditions in which they live. Try to ease the situation. Here are some tips or things to say to help:

- ✓ I did not come here to tell you what to do or to judge you.
- ✓ I did not come here to pick on you and your family.

✓ I know that you were not expecting a visitor.

✓ I don't know how you keep up with all of the responsibilities you have.

✓ I don't know how you do it. The chores never end. And with kids...



Your work in the community may involve talking to all types of people in all sorts of settings. You may be talking to them at different places— their home, a community center or their place of work. Sometimes you will talk with an entire family. Sometimes you will only talk to the mother or caretaker. And other times you may talk only to single men. Our advice applies to a number of different settings in which you may be talking to individuals, families or groups. Be sure to reflect and adjust or adapt our suggestions to your situation.



The key to being a successful promoter is understanding the beliefs, habits and knowledge of a family and not judging them. This will help you talk about any topic.

Make an effort to understand a family's way of thinking, their values and their way of doing things. This will allow you to more easily suggest new alternatives. Or to praise and encourage them to continue with their current practices, and to share their experiences with other families.

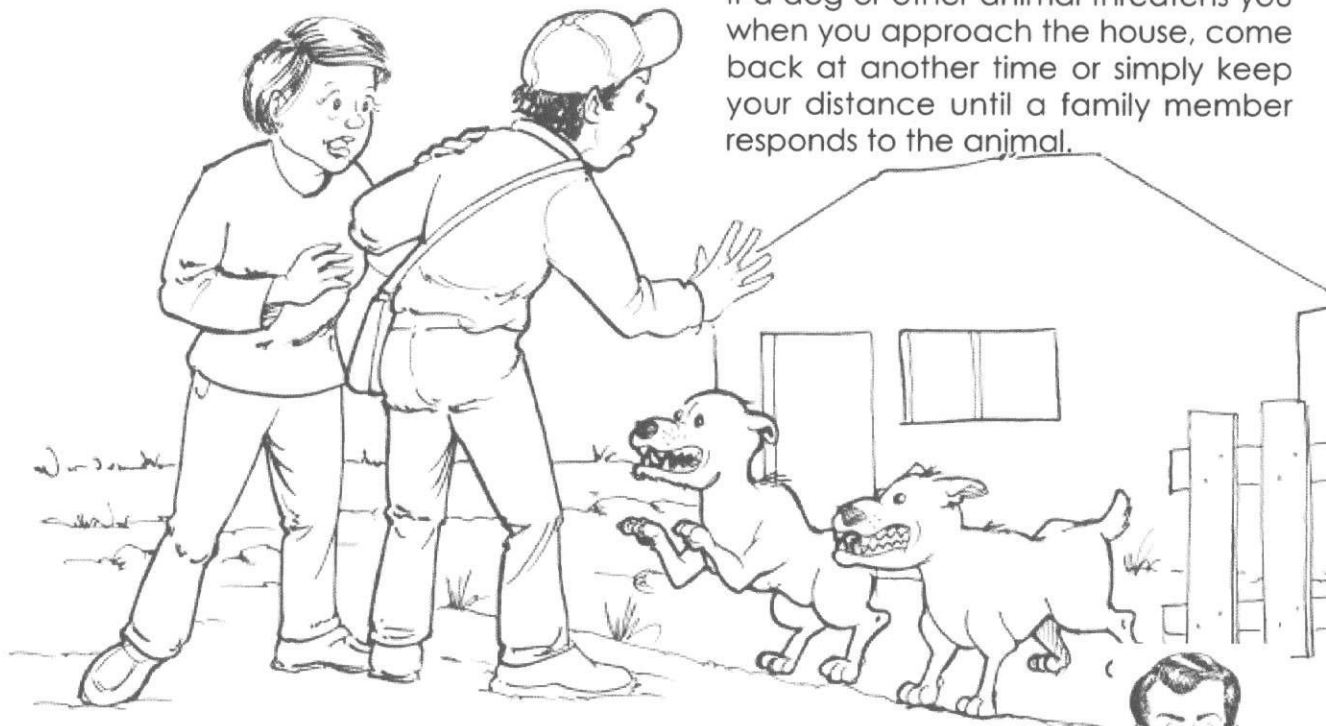


How do I protect myself when working in the community?

Your safety is very important.

- ✓ If any situation makes you feel worried about your safety, stop immediately and come back another time.
- ✓ It is a good idea to work in pairs. Working in pairs is safer, especially if you are not familiar with a particular neighborhood. Working in pairs will also allow you to share responsibility. The information you share with the family may be more complete since there are two people paying attention to the needs and concerns of the family.

- ✓ If there are both male and female promoters in your program, it is a good idea for the pair to have one male promoter and one female promoter. In some cases this may make conversations easier.
- ✓ Avoid working at night. But if you have to, make sure you arrange the visit ahead of time.
- ✓ Avoid getting lost by double checking the directions ahead of time.
- ✓ Once with the family, be aware of the exits in case of an emergency. If you have a vehicle, park it where it is easy to get to.
- ✓ Be careful around dogs, cats, other pets, chickens and loose animals in the community. Not all of them are friendly. If a dog or other animal threatens you when you approach the house, come back at another time or simply keep your distance until a family member responds to the animal.



REMEMBER YOUR SAFETY IS IMPORTANT!

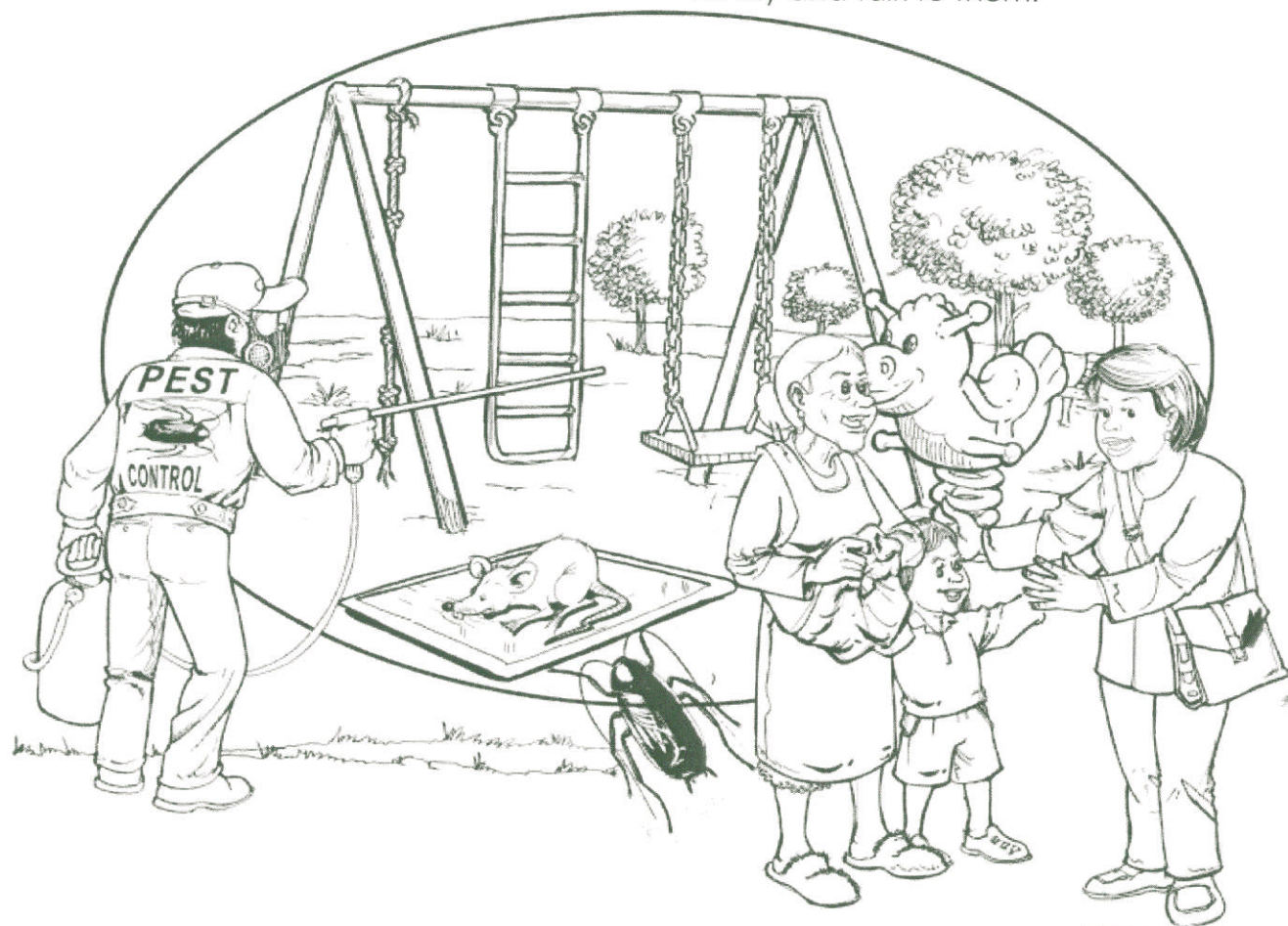


How do I start talking about pesticides?

Talking about pesticides, particularly those used in the home, often involves discussing various bugs, mice and other pests. Talking about these pests may involve a discussion about household cleanliness. This might be difficult for a family to discuss as they may feel badly when they realize some of their practices

may be harmful or that they have done things the "wrong" way.

In your efforts to generate trust, you have already been observing and listening actively. And you likely will have a sense of the family's habits and thinking. All of this will help you better understand the family and talk to them.



As promoters, it's important to look for and use common terms. Not everyone will use the term pesticide. Instead, they will call it bug spray, rat poison, roach killer, weed killer, poison, etc. Be sure to say what you mean by the word "pesticide."





Some ways to get started are:

- ✓ Ask the family to share their concerns about pests and pesticides or to see if they have any issues they want to discuss.
- ✓ Talk about pests in general and how they get into our homes and the community.
- ✓ Share concerns about pesticides used at work.
- ✓ Mention that pests, as well as some of the pesticides used, may be harmful and that you would like to share ideas with them to help prevent having to use pesticides. Or if they have to use pesticides, there may be safer ways to use them.
- ✓ Talk about pesticides used on the lawn or in the garden. This may help put the person at ease as it has little to do with household cleaning practices.

PESTICIDES

What are pesticides?

Pesticides are chemicals used to control or kill "pests"—insects, rodents and weeds and even germs. While pesticides may help control unwanted pests, they can also be harmful to plants, animals and people.

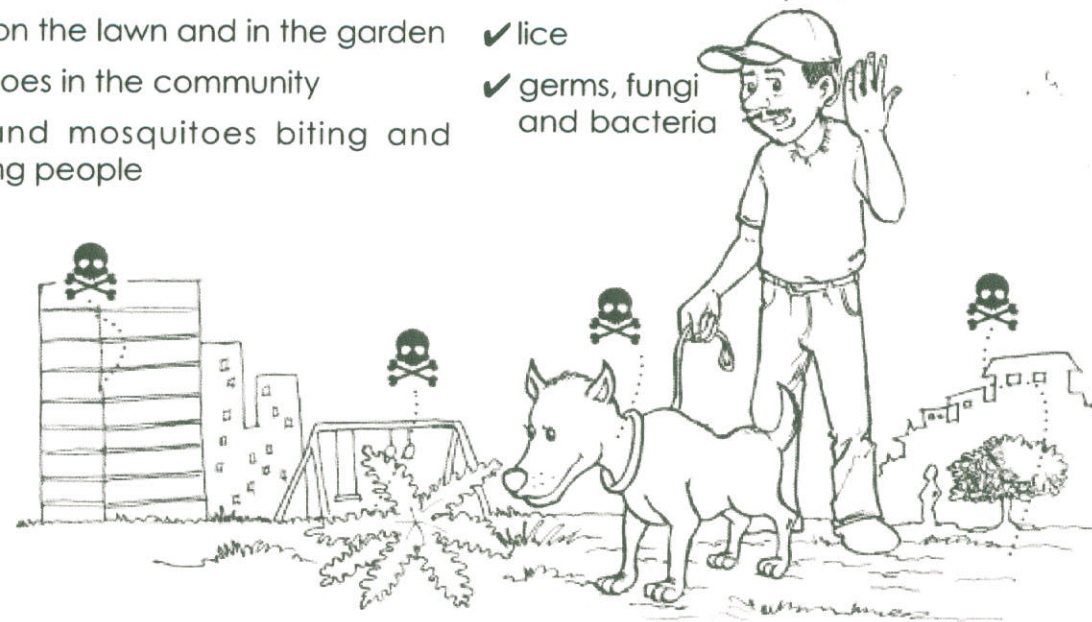
Ask the family how they deal with unwanted flies or mosquitoes or ants. If they mention some kind of pesticide, use that as an opening to the conversation. For example, if the family mentions that they spray for ants, take advantage of the situation and explain what pesticides are and how they are used.



How are pesticides used?

Most pesticides are used in agriculture, but pesticides are also used at home and in the community to kill or get rid of:

- ✓ bugs, mice and rats
- ✓ weeds on the lawn and in the garden
- ✓ mosquitoes in the community
- ✓ ticks and mosquitoes biting and bothering people
- ✓ fleas and ticks on pets
- ✓ lice
- ✓ germs, fungi and bacteria



Different types of pesticides are used to control various pests:

Insecticides to kill or control insects



Herbicides to control weeds

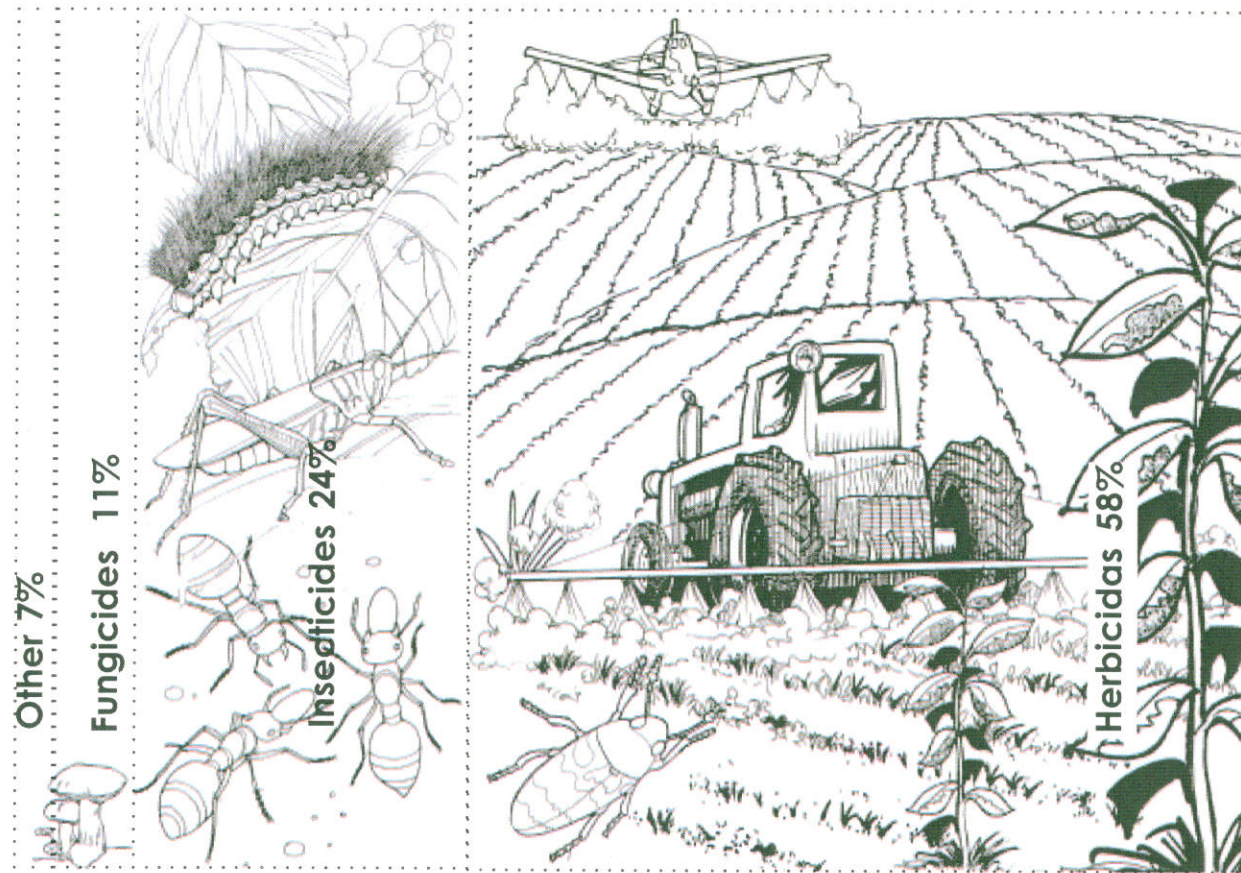
Rodenticides to control rats,
mice and other rodents



Fungicides to control
plant disease

Types of pesticides used in the United States

This chart shows us the different types of pesticides used in the United States.



Fuente: Wagner, *In Our Backyard*, 1994

Pesticide Ingredients

There are two components in pesticides: the **active ingredient** and the inactive or **inert ingredient**.

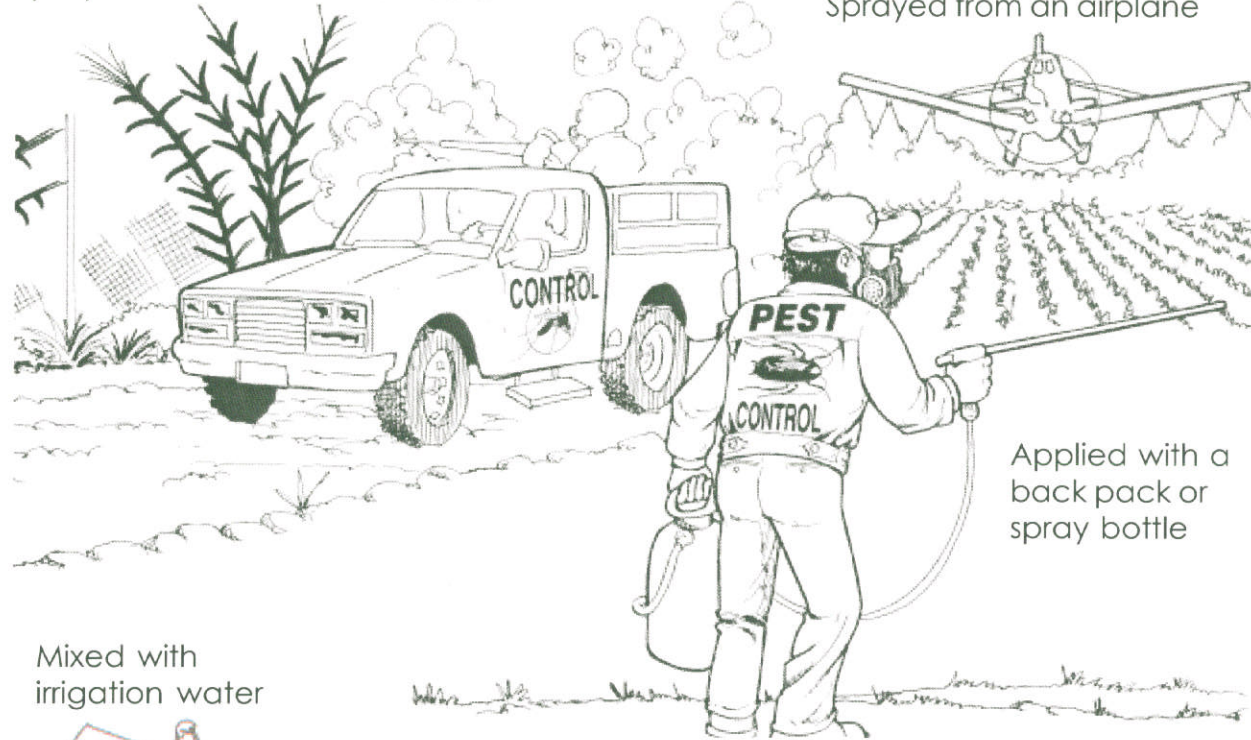
The **active ingredient** is the part of a pesticide that kills or controls the target pest.

Inert or inactive ingredients are added to the pesticide to act as a carrier of the

pesticide or to improve the way the active ingredient works. Inert ingredients make applying the pesticide easier and more efficient. Water, kerosene, detergents, and chlorinated solvents are commonly used inert ingredients. Typically, the specific inert ingredients are unknown to the general public because they are known as business trade secrets.

Pesticides come in many different forms and are applied in different ways:

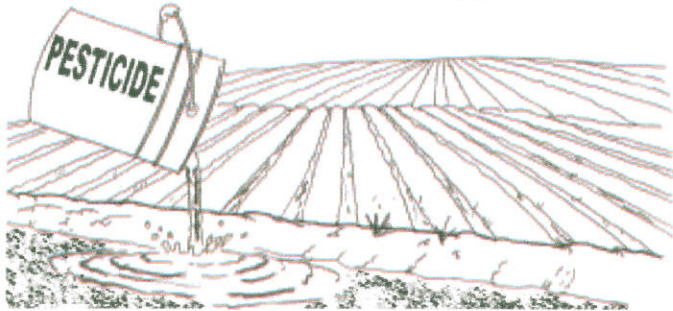
Sprayed from a truck or a tractor



Sprayed from an airplane

Applied with a back pack or spray bottle

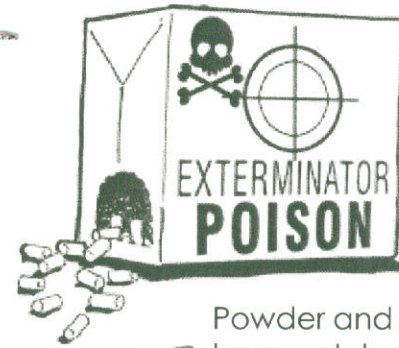
Mixed with irrigation water



Sticky paper and glue traps



Gel, chalk and pellet form



Powder and granules in bags or tubes





Baits

Seeds



Shampoos and soaps



Insect repellents

Many times migrant farmworkers and those of us living along the border are from rural, agricultural communities. Many of us have a lot of experience with pesticides in our home communities. You can learn from the family about their knowledge of pesticides if you ask where the family is from and ask if they have used pesticides or what types of methods were used to control or kill pests.



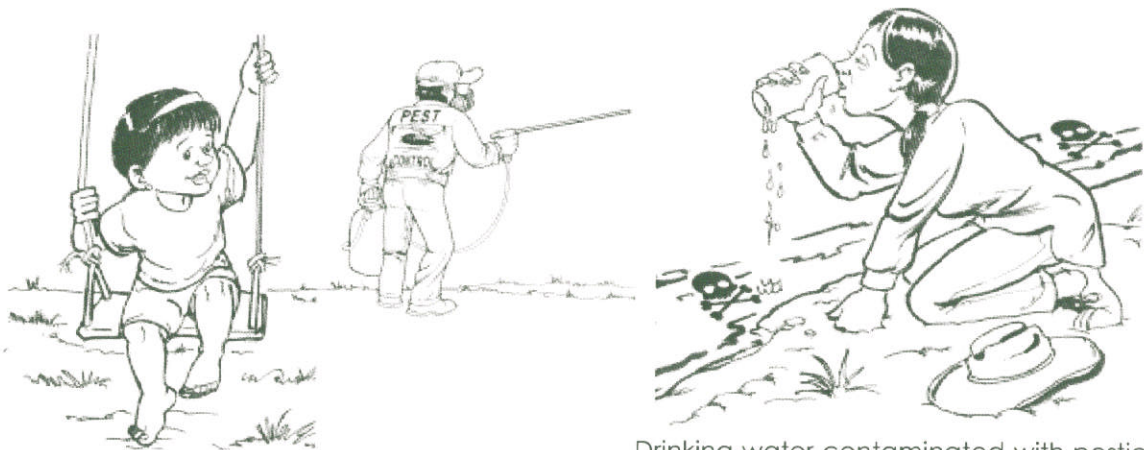
How are people exposed to pesticides?

There are many ways that people are exposed to or come in contact with pesticides everyday.



Drift from a nearby field that has just been or is being sprayed.

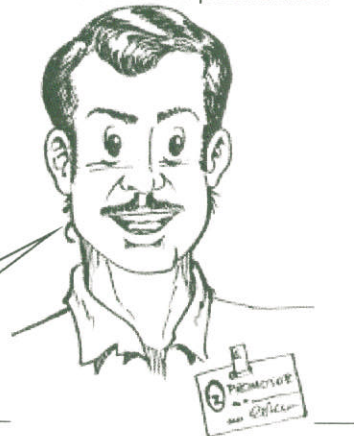
Drift from pesticides being sprayed in the community.



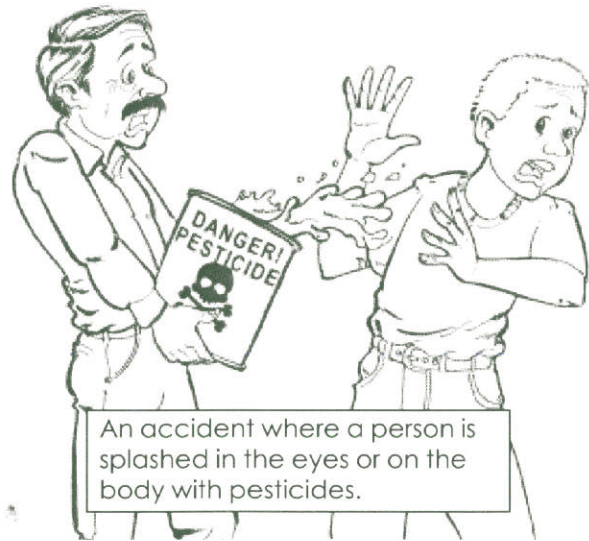
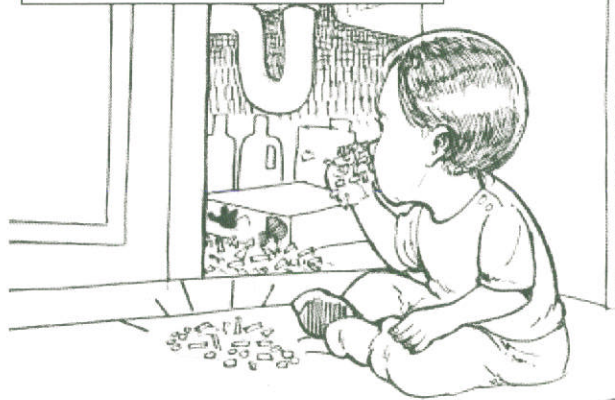
Drinking water contaminated with pesticides.

Playing, working or just being in areas that have just been sprayed such as homes, schools, offices, stores, factories, fields, lawns and gardens.

You can ask families if they have ever heard of anyone getting sick or poisoned by pesticides or household chemicals. You can ask where this happened and continue the conversation from there. Examples may be:



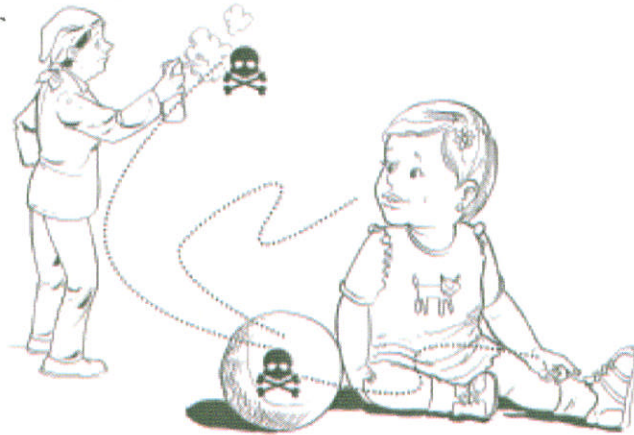
An accident where a person mistakenly eats or drinks a pesticide.



An accident where a person is splashed in the eyes or on the body with pesticides.

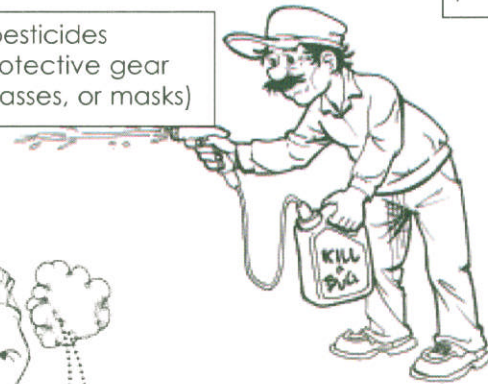


Eating fruits and vegetables with pesticides on them.

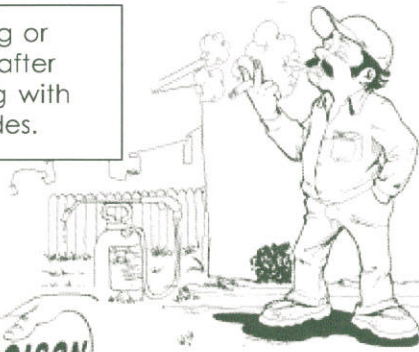


Touching things that have pesticides on them (the floor, ground, toys, clothing, plants) and then putting hands in the mouth.

Applying pesticides without protective gear (gloves, glasses, or masks)



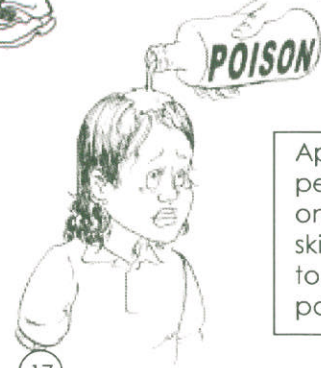
Smoking or eating after working with pesticides.



Handling clothes that have pesticides on them.

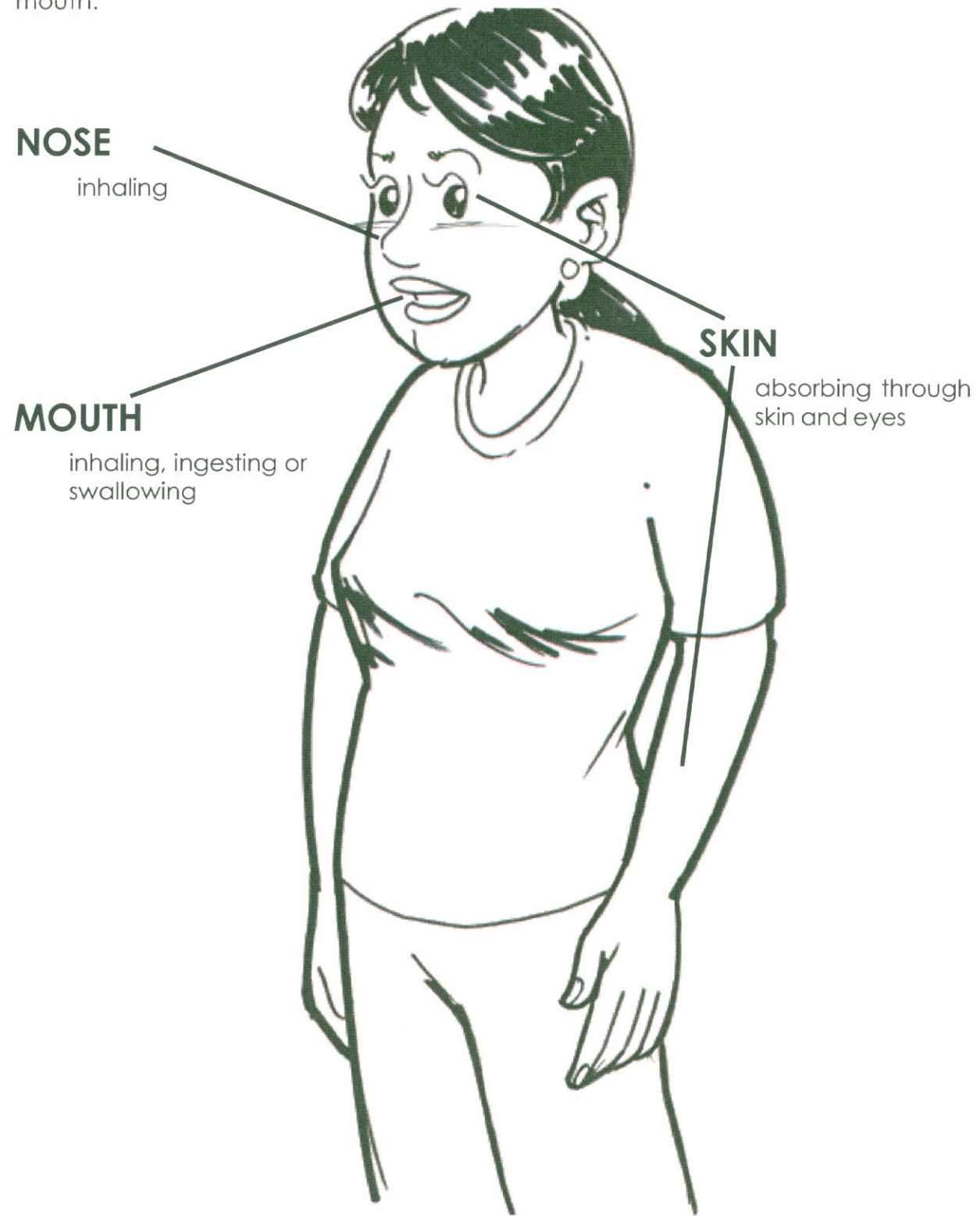


Applying pesticides directly onto the head or skin of a person to kill lice or parasites.



How do pesticides enter our bodies?

There are three "routes of entry" or ways to be exposed to pesticides: skin, nose and mouth.



PESTICIDES AND HEALTH

Are pesticides dangerous to our health?

Yes. But it depends on the amount of pesticides, the length of exposure, the type of exposure, the type of pesticide and other factors like age, sex, etc.

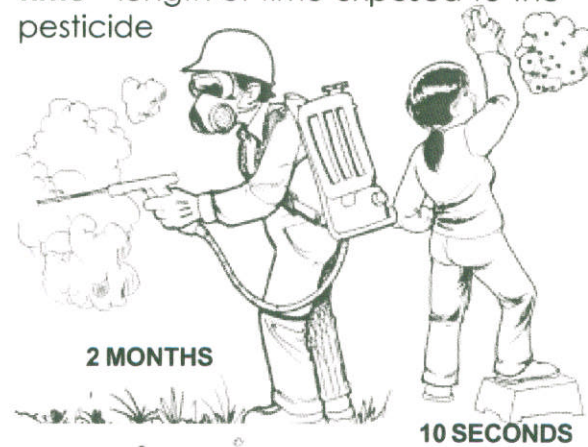
1. The “dose-time” relationship

The damage depends on the dose or the amount of pesticide a person has been exposed to and the time or duration of this exposure.

Dose—amount of the pesticide



Time—length of time exposed to the pesticide



For example, think how a person would feel if he drinks one beer in an hour. Now, think how a person would feel if he drinks three beers in an hour.

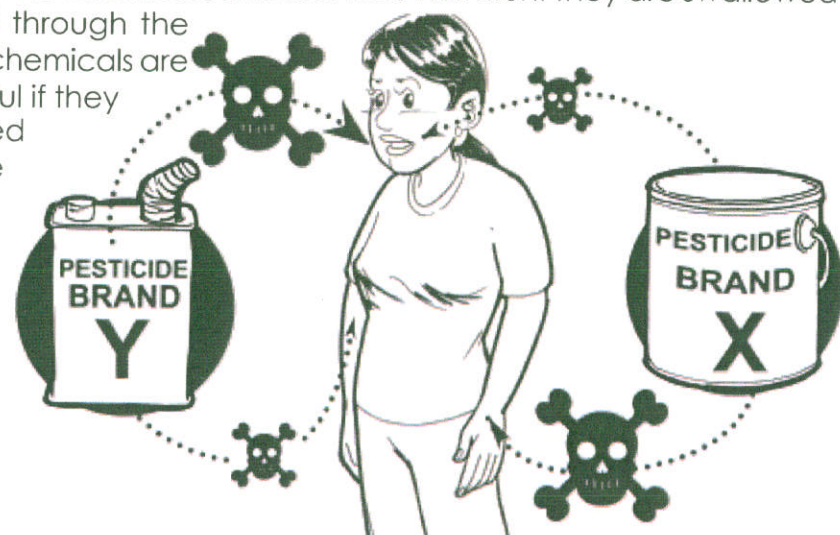
hour. This is what we mean by the dose-time relationship.

Drinking three beers in an hour will likely make a person feel dizzy and less coordinated. Drinking three beers over the course of a day would not have the same effect as drinking three beers in an

In this example, three beers is the *dose*. But *time* makes a big difference. If a person drinks three beers in an hour the effect will be very different from three beers over the course of a day.

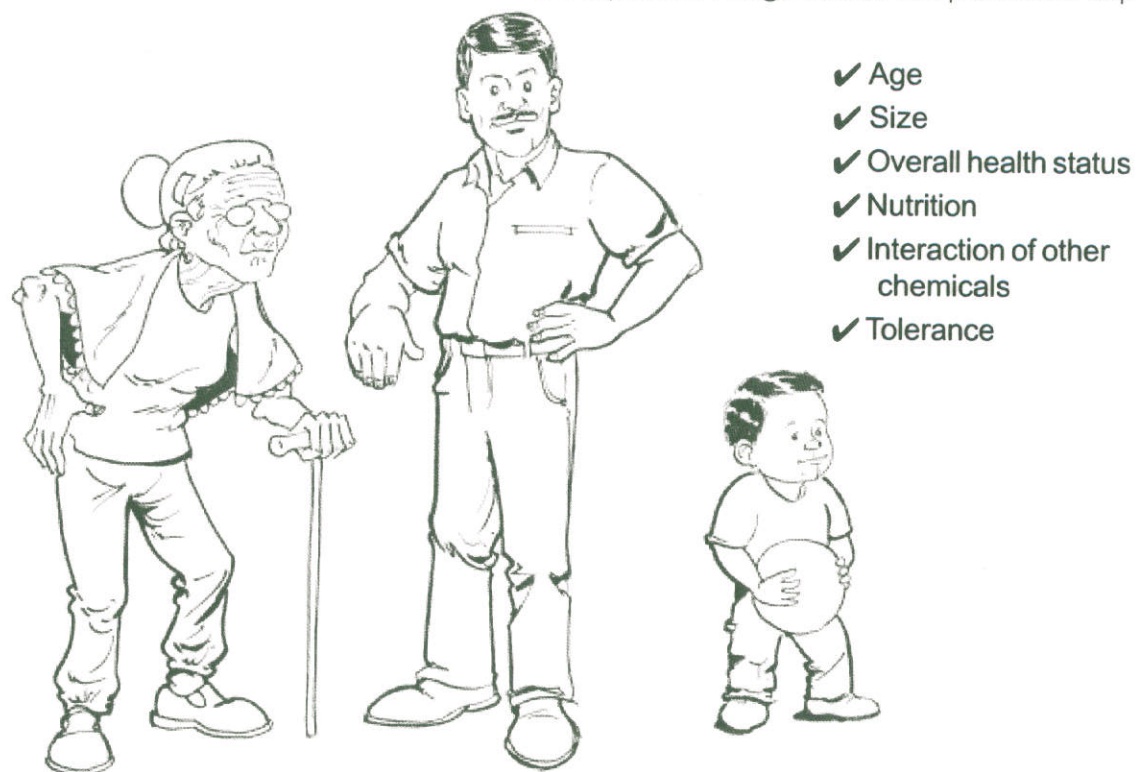
2. Routes of Exposure

The health effect also depends on the route of exposure or how chemicals get into the body. Some chemicals can be more harmful if they are swallowed or inhaled than if absorbed through the skin. Other chemicals are more harmful if they are absorbed through the skin than if they are inhaled.



3. Other Factors

There are other factors that determine if a person will get sick from pesticide exposure—



4. Type of Pesticide

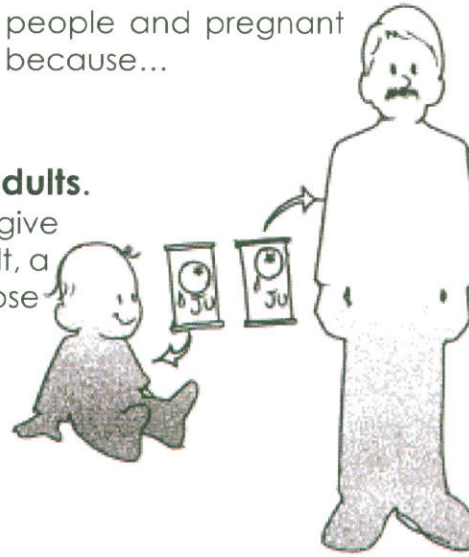
How a pesticide will affect our health depends on the type of pesticide and its **toxicity** or how toxic it is. **Toxic** means that a substance has the ability to produce injury. Not all pesticides are the same and some are less toxic than others.

Who is most vulnerable?

Pesticides cause more harm to children, elderly people and pregnant women. There is particular concern about children because...

Children are smaller and weigh less than adults.

Children are not small adults. Just as you would not give the same amount of medicine to a child as an adult, a child can't handle the same amount or the same dose of a pesticide as a full grown adult.



Children explore the world with their hands and mouths.

Little ones learn about the world by touching and putting things in their mouths. They are more easily exposed this way.



Children are closer to the ground.

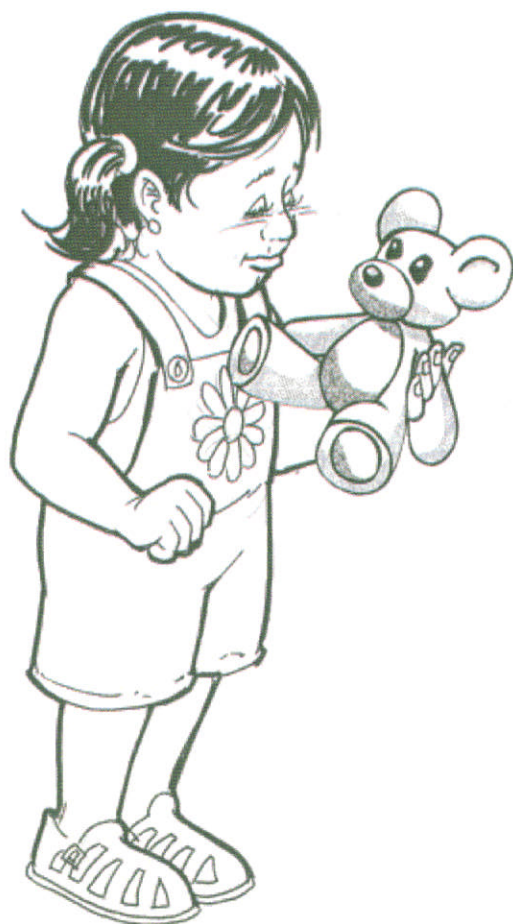
Pesticides settle on the ground and floors and the dust that is on the floor. When children crawl or play on the floor or ground they are closer to pesticide residue. Their crawling also stirs up the contaminated dust which they can breathe in.

Ask if exposure to a pesticide or chemical would have the same effect on a child as it would on the child's mother. Expand on their answer to explain the reasons why children are more vulnerable.



Children are still developing.

Before birth and throughout childhood, the body systems, like the nervous system (brains and nerves) and the circulatory system (heart, arteries, veins), are still growing in children. Exposure to pesticides when still developing may be more harmful and cause permanent damage.



Children's bodies function differently.

Pound for pound, children breathe more air, and eat and drink more than adults.

Children breathe more air and breathe faster than adults – so more toxins can get into their bodies.

Children do not process toxins as quickly as adults – so more toxins stay in their systems longer. The parts of the human body such as the kidneys and liver that help get rid of waste or poison do not function like adults. In cases where an adult might be able to **excrete** or get rid of waste or poison, a child is unable to do this.

How much can pesticides hurt us?

A person can be exposed to pesticides and have more than one symptom or sign. Sometimes the symptoms or signs do not show for hours, days or even years. Many people may be exposed to pesticides and not even know it! There are two types of health effects—one is **acute** or immediate and the other is **chronic** or takes place over longer periods of time.

Signs and symptoms of acute pesticide poisoning

Nose and Mouth: runny nose, drooling.

Chest and Lungs: pain, breathing problems.

Stomach: pain, diarrhea, nausea and vomiting.

Legs and Arms: muscle cramps or pains, twitching, trouble walking.

Skin: itching, rashes, bumps, redness, blisters, burning, sweating too much.

Head and Eyes: headaches, vision problems, small pupils.

Hands: damage to fingernails, rashes, numbness and tingling in fingers.

Other general signs: confusion, weakness, trouble concentrating, muscle twitching, restlessness and anxiety, bad dreams and trouble sleeping.

If you have any of these problems while working with pesticides, leave the worksite immediately. Do not wait until you feel worse. **Get away from the pesticides and go to a hospital or clinic right away.**

A severe poisoning can kill. Other severe symptoms include unconsciousness, loss of control over bladder and bowels (peeing and pooping without control), blue lips and fingernails, shaking.



Jeff Conant, "Pesticides are Poison" in *Community Guide to Environmental Health* (Berkeley, CA: Hesperian Foundation, forthcoming).



Long-term or Chronic Effects

Some people are exposed to low levels of pesticides over long periods of time. Many people do not know that these exposures may lead to long-term health problems. These health problems can be severe and irreversible.

Some of the long-term effects of pesticide exposure include:

- Cancer: Some pesticides and pesticide ingredients are known or believed to cause cancers such as leukemia and brain cancer.
- Nervousness, anxiety, memory loss, mood changes, trouble concentrating and learning difficulties.
- Weakness in the arms and legs.
- Damage to the lungs: Asthma attacks, respiratory illnesses and sensitivities.
- Damage to the immune system: This makes it easier to get infections and allergies and recover from illnesses.



Remember that children are often more vulnerable than adults. The signs of acute pesticide poisoning in children are similar to adults, but may also include tiredness, fits and shaking (seizures) and unconsciousness.



Reproductive Health Effects

Women can become unable to get pregnant and men can become sterile.

Pesticides may cause birth defects, miscarriages or stillbirths. Being exposed to pesticides does not mean that your baby will have birth defects or that you will have a miscarriage. It simply means that there is a greater chance of this happening.

What do we do if someone has been poisoned?

Contact or take the person immediately to a clinic or hospital.

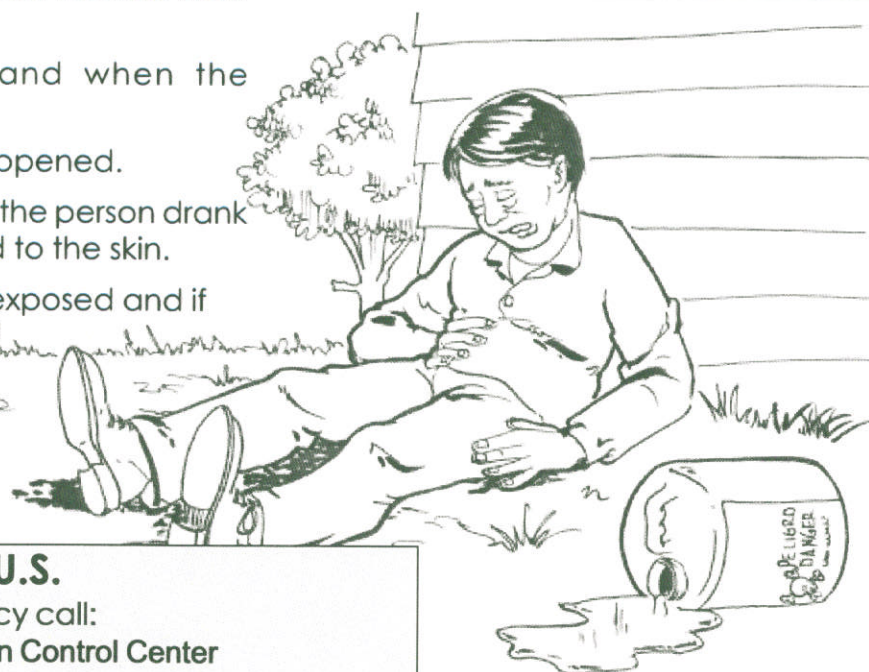
It is important to tell the doctor, paramedic, or nurse that you think pesticides have caused the person to get sick. If possible, you should also tell them the following:

- ✓ Age, weight and symptoms of the person poisoned.
- ✓ Name of the product. If you can, bring the container or label so that the health provider may read it.
- ✓ Registration number from the EPA in the US or just the registration number from the label in Mexico.
- ✓ Time of exposure and when the symptoms began.
- ✓ How the exposure happened.
- ✓ Amount swallowed (if the person drank it), inhaled or exposed to the skin.
- ✓ If other people were exposed and if they are experiencing similar problems and symptoms.

Mexico

In case of an emergency call:

- ✓ 066 Emergency Services
- ✓ The nearest clinic or health center
- ✓ For more information on what to do in case of a poisoning contact, SINTOX (Information Center for Pesticide Toxicology) at 01 800 009 2800 or in the internet site www.cofepris.gob.mx



U.S.

In case of an emergency call:

- ✓ 1-800-222-1222 Poison Control Center
- ✓ 911
- ✓ For more information about pesticides call the National Pesticide Information Center at 1-800-858-7378 or visit their website at <http://npic.orst.edu/>

Ask if they know where to go in case of a poisoning or an emergency. If they do not know a place, offer the names, addresses and phone numbers. Prepare the necessary information in advance.



PESTICIDES IN AND AROUND THE HOME

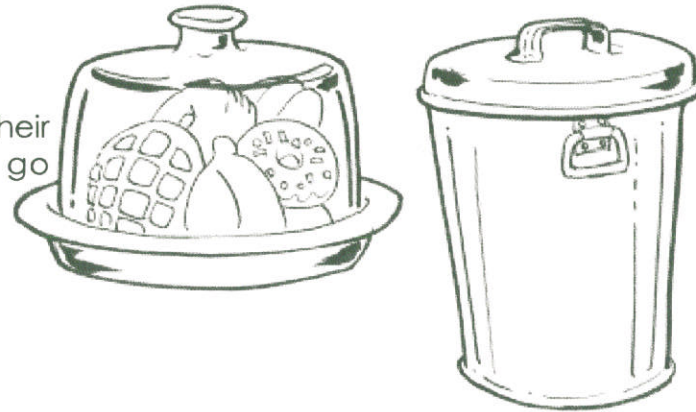
How do we prevent pests from coming into our homes?

One of the best ways to protect ourselves from pesticides used in and around the home is to NOT USE THEM! Try to prevent those little critters from getting into your home in the first place. Here are some steps you can take to prevent pests from entering:

1. Starve them out!

Pests need food to survive. If you take their food away, they may decide to go elsewhere.

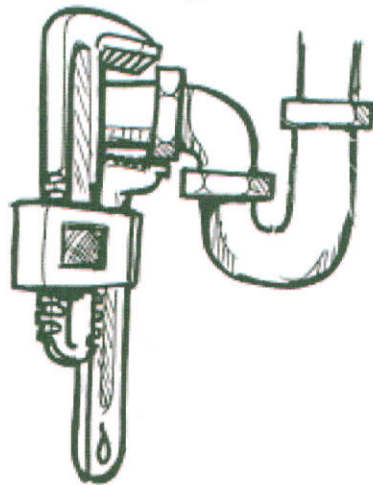
- ✓ Put all food away and try to keep it in sealed containers.
- ✓ Clean up food and water spills.
- ✓ Cover the trashcan with a lid.
- ✓ Try not to leave pet food out overnight.



2. Dry them out!

Insects, mice, rats and lots of other pests need water just like we do.

- ✓ Fix leaky pipes and faucets.
- ✓ Empty pet water bowls.



3. Keep them out!

- ✓ Put screens on windows.
- ✓ Repair screens.
- ✓ Patch holes or cracks.
- ✓ Put screens on pipes or vents.



What are the safest ways to get rid of pests?

Here are some simple tips to control pests.

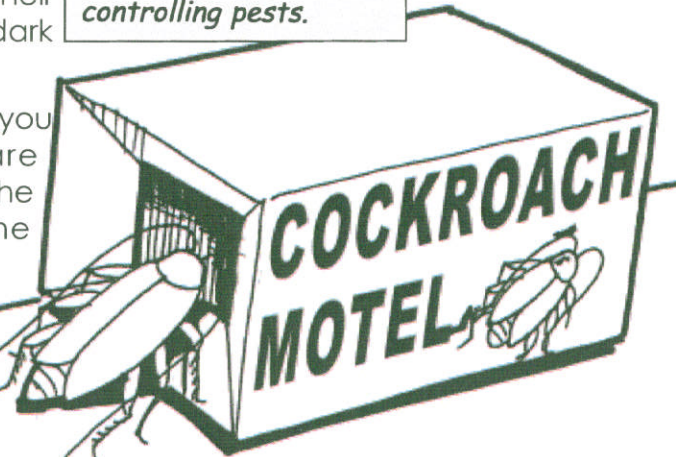
Cockroaches

1. Find them
2. Deny them shelter, food and water
3. Kill them

1. Find them

- ✓ Look for evidence of cockroaches, such as living or dead roaches, their egg cases, or their feces (small dark brown pellets).
- ✓ Place sticky traps in areas where you suspect the cockroaches are living, like under a sink, behind the refrigerator or stove, or in the back of a kitchen cabinet.
- ✓ Place the traps against the wall because roaches like to stay along the edges of floors.
- ✓ Check on the traps during the next week or two and dispose of them when they have collected a large amount of roaches.

You can ask the family about some of the old remedies their parents or grandparents once used to get rid of pests and how those practices differ from the new methods now used. Using the family's response, you can offer safer, less toxic or alternative methods for controlling pests.



2. Deny them shelter, food and water

Shelter

Cockroaches live in small tight places and prefer to live on porous surfaces like wood, paper, cardboard, insulation and cloth. Focus your efforts on areas where you caught the largest number of roaches in the sticky traps.

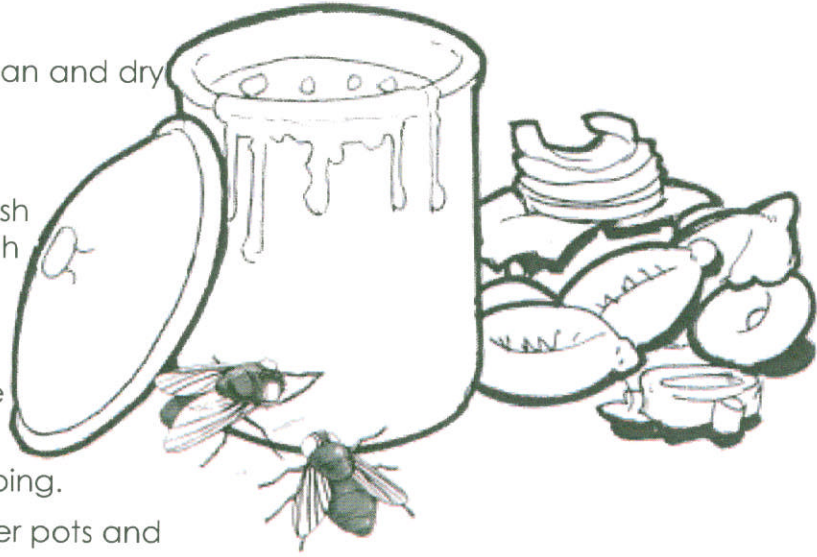
Deny them shelter by organizing storage areas and cleaning all surfaces (removing clutter). Also,

- ✓ Seal all cracks and crevices with silicone caulk.
- ✓ Put screens over vents and pipes that open to the outside.
- ✓ Seal spaces around corners and pipes.



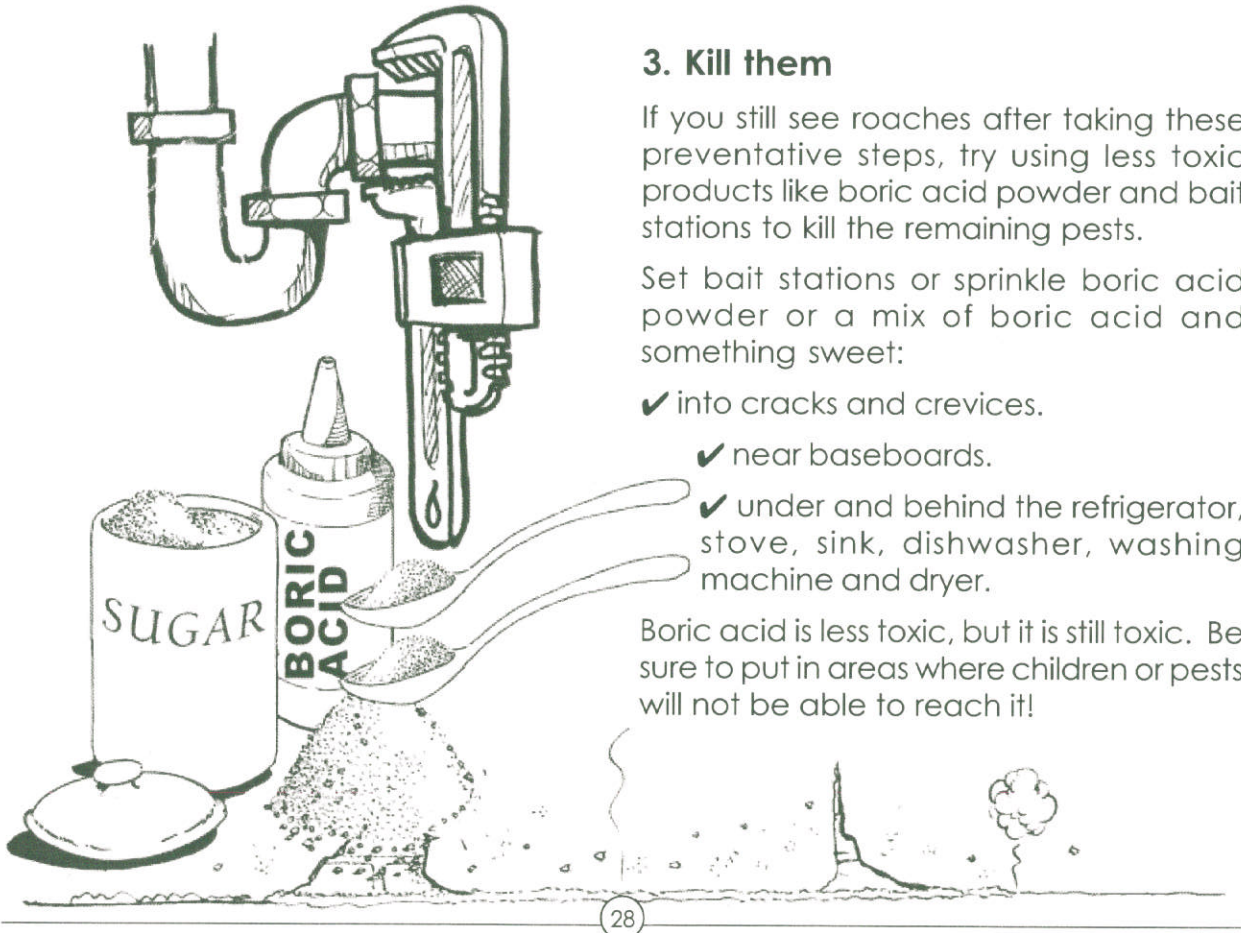
Food

- ✓ Seal up boxes and bags of food.
- ✓ Don't leave pet food and water bowls out overnight.
- ✓ Pick up dirty dishes and clean and dry them right away.
- ✓ Wipe up spills and crumbs.
- ✓ Keep a tight lid on the trash can and take out the trash often.



Water

- ✓ Drain dishwater from the sink.
- ✓ Fix leaky faucets and plumbing.
- ✓ Empty excess water in flower pots and plant stands.
- ✓ Insulate cold water pipes to prevent condensation.



3. Kill them

If you still see roaches after taking these preventative steps, try using less toxic products like boric acid powder and bait stations to kill the remaining pests.

Set bait stations or sprinkle boric acid powder or a mix of boric acid and something sweet:

- ✓ into cracks and crevices.
- ✓ near baseboards.
- ✓ under and behind the refrigerator, stove, sink, dishwasher, washing machine and dryer.

Boric acid is less toxic, but it is still toxic. Be sure to put in areas where children or pests will not be able to reach it!

Ants

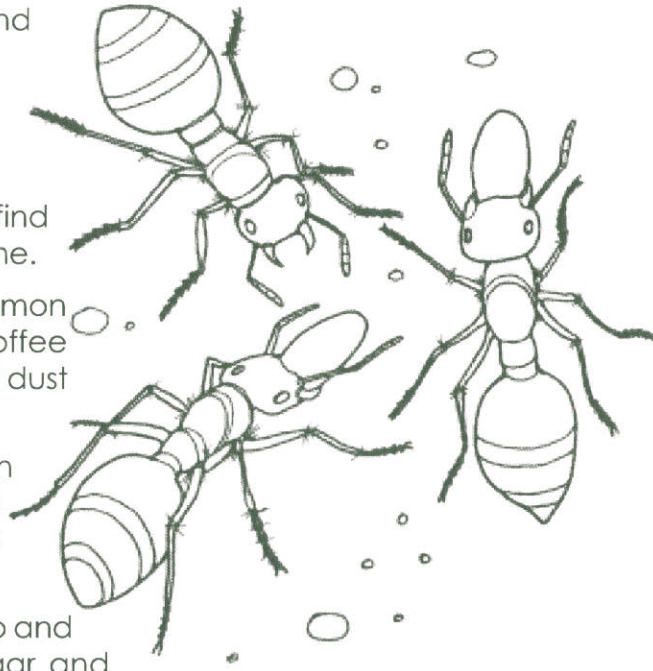
To get rid of ants in your home:

1. Find their point of entry and seal it.
2. Destroy the nest.

1. Find their point of entry

Follow the trail of ants until you find where they are entering your home.

- ✓ Prevent their entry with fresh lemon juice and peel, chalk, damp coffee grounds, bone meal, charcoal dust or cayenne pepper.
- ✓ Temporarily seal the area with Vaseline®, until you can permanently seal it with silicone caulk.
- ✓ Spray or wipe the area with soap and water or solution of half vinegar and half water in areas where there are a lot of ants.



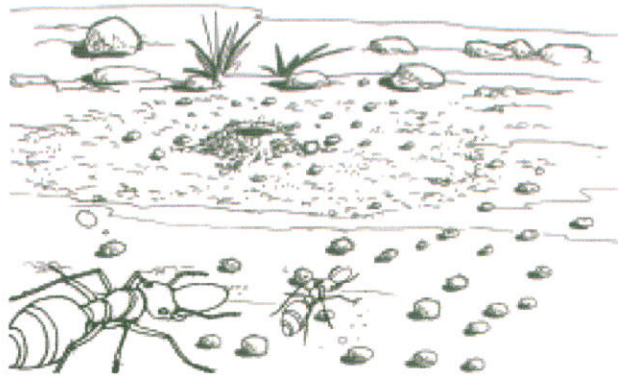
2. Destroy the nest

If you cannot find the nest, set boric acid baits near the point of entry. You can buy these baits or make your own trap. To make your own trap, mix the following ingredients together and pour into a lid or shallow container:

- ✓ 2 teaspoons of boric acid powder
- ✓ 4 ounces of water
- ✓ 1 teaspoon sugar

The ants will carry poison back to their nest and kill other ants.

If you know where the nests are, pour 1-2 gallons of boiling water onto the individual ant hills.



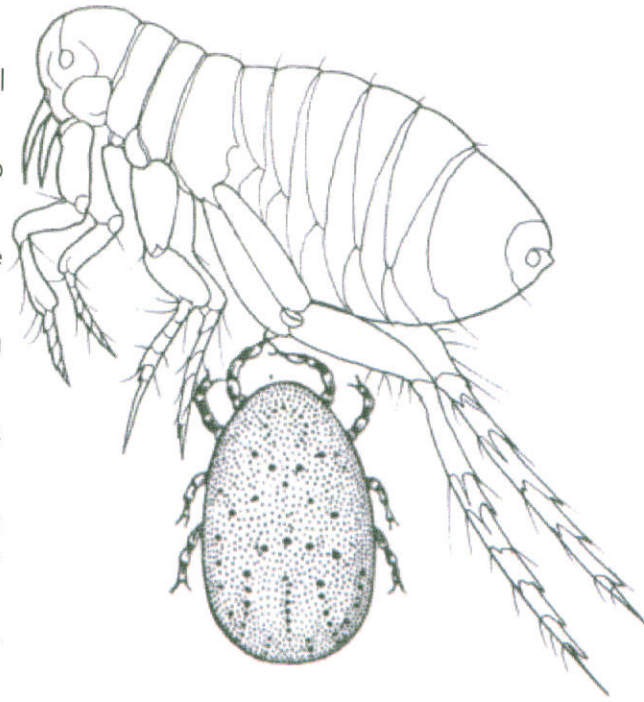
Fleas

If you have a pet with fleas, try to control the fleas—

- ✓ Groom your pet with a flea comb to inspect for and remove fleas.
- ✓ Vacuum often and throw away the bag.
- ✓ Wash pet bedding in hot water once a week.
- ✓ Use soap and water to clean your pet's sleeping areas.
- ✓ Shampoo your pet regularly with plain soap & water or grooming shampoo (without pesticides).

If these steps are not enough, you may need to buy a less-toxic product:

- ✓ Pheromone pills (from a veterinarian) to reduce the flea population.
- ✓ Products labeled "insect growth regulators" or "IGRs" to kill the offspring of any fleas currently on your pet.
- ✓ Avoid using any product listing the following chemicals as the active ingredient: chlorpyrifos, dichlorvos, phosmet, naled, tetrachlorvinphos, diazinon, malathion, carbaryl and propoxur. These chemicals are dangerous to adults and children.



Mosquitoes

Reduce the Risk

The most effective way to reduce a local mosquito population is to remove their breeding areas in sources of standing water, such as old discarded tires, clogged gutters, planters, bird baths, or tree stump holes. Empty children's swimming pools when not in use. Other easy steps to consider include:

- ✓ Keep grass cut short and trim shrubs to minimize hiding places for adult mosquitoes.
- ✓ Wear a hat and light-colored, loose-fitting clothing (avoid wearing bright colors or flowery prints).
- ✓ Avoid using scented soaps and shampoos, lotions, oils or perfumes, including tanning products.
- ✓ Consider appropriate lighting—regular light bulbs attract mosquitoes, while florescent lights neither attract nor repel them.

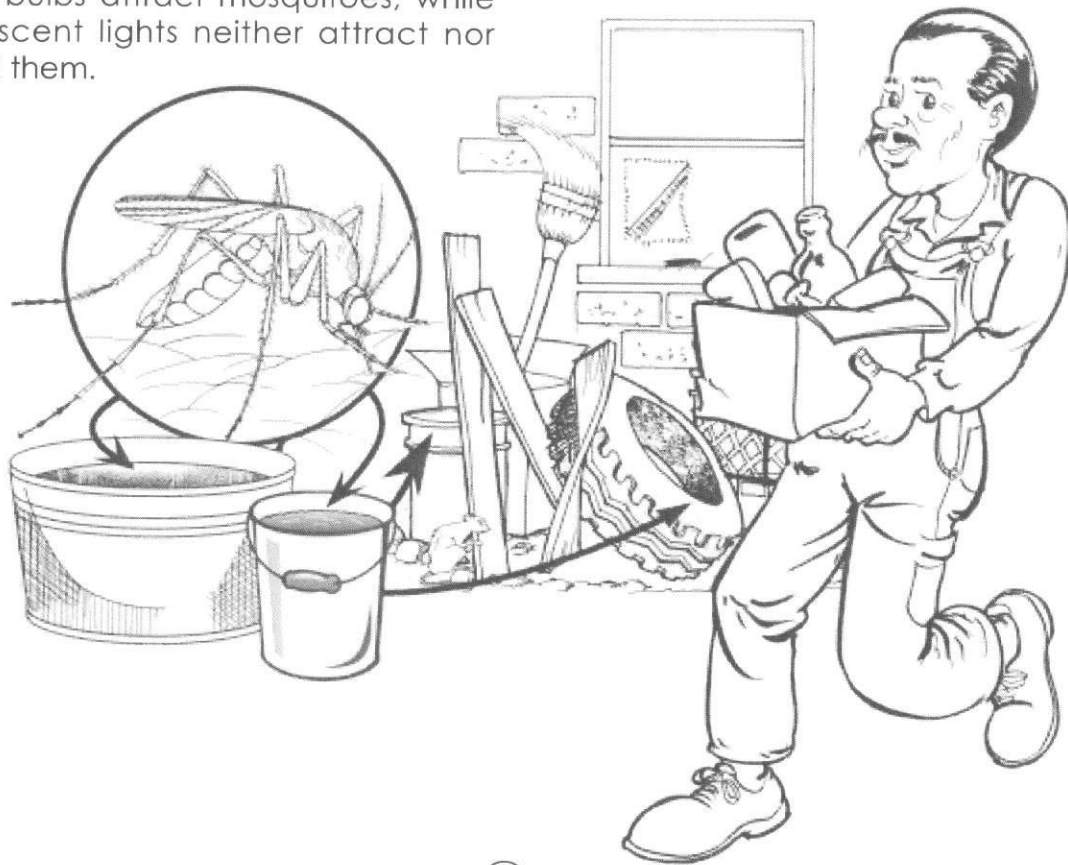
Repellents

Most insect repellents include the chemical DEET (N,N-diethyl-metatoluamide). DEET is absorbed through the skin and can cause harm, especially to children. Other repellents include natural ingredients such as citronella, eucalyptus oil, or soybean oil, which are non-toxic and safer for use on children.

Repellents containing oil of lemon eucalyptus [p-menthane 3,8-diol (PMD)] provide protection similar to repellents with low concentrations of DEET.

If you use a repellent with DEET, it should contain no more than 10 percent of the chemical. The concentration of DEET varies significantly from product to product, so read the label of any product you purchase.

Repellents with DEET should be used sparingly on children 2 through 6 years of age and not at all on infants under the age of 2. See page 34 for safe use of repellents.



**When we have no choice...
How do we safely use pesticides?**

If you have tried everything to get rid of a pest and nothing is working, then it may be necessary to use a pesticide. Here are some safety tips:

- Use the least toxic method of pest control. 2. Use sprays as a last resort.
1. Try using traps (like ant traps or roach traps) and baits first.
 3. Avoid using household "bombs" or pesticide products that spray an entire house or room at one time.



Use the pesticide for the pest that it is designed to control.

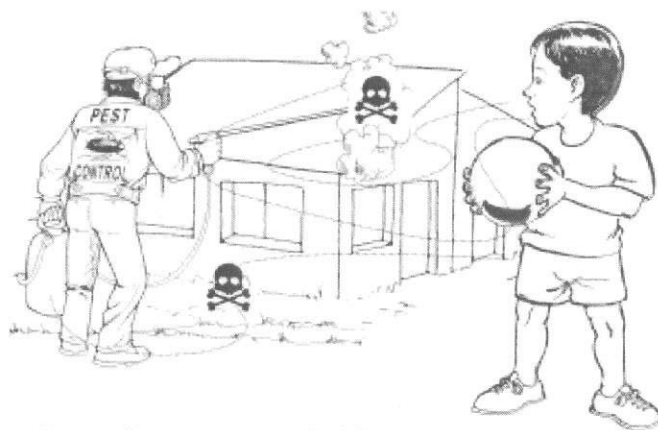


Read the label and follow the directions.

Wear protective clothing such as long sleeved shirts and pants and rubber gloves.

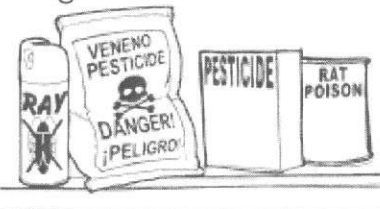


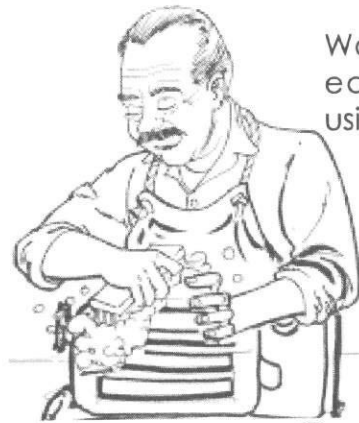
Make sure food, dishes and utensils are put away or covered in the areas where pesticides are being used.



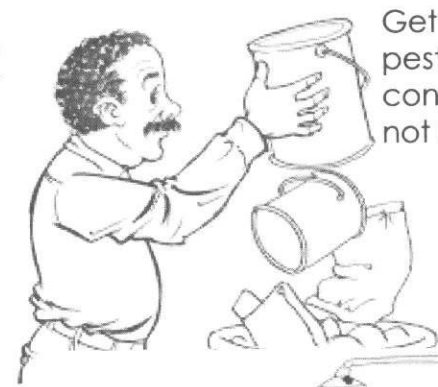
Do not use around children.

Store all pesticides in their original container and away from pets and children.





Wash application equipment after using it.



Get rid of pesticide containers. Do not reuse them.



Wash clothing worn while applying pesticide separately.



Wash hands and if possible bathe as soon as possible after applying pesticides.



Never take pesticide containers home from work.



Never use pesticides from the farm at home.

Ask if they have applied pesticides in or near their home. Ask them some ways they could protect their children from being poisoned or exposed to pesticides. Try to make them think and to offer answers without you having to "tell all" to the family. Take advantage of what they think and then link it to the information you are offering.



Insect repellent is another common pesticide that people use and sometimes there is not an alternative. If you need to use a repellent here are some tips:

- ✓ Apply only to exposed skin and/or clothing. Do not use under clothing.
- ✓ Never use repellents over cuts, wounds, or irritated skin.
- ✓ Do not apply to eyes and mouth, and apply sparingly around ears. When using sprays do not spray directly onto face; spray on hands first and then apply to face.
- ✓ Do not allow children to handle the product, and do not apply to children's hands.
- ✓ When using on children, apply to your own hands and then put it on the child.
- ✓ Do not spray in enclosed areas.
- ✓ Avoid breathing a repellent spray and do not use it near food.
- ✓ Use just enough repellent to cover exposed skin and/or clothing. Heavy application and saturation is generally unnecessary for effectiveness. If biting insects do not respond to a thin film of repellent, then apply a bit more.
- ✓ After returning indoors, wash treated skin with soap and water or bathe. This is particularly important when repellents are used repeatedly in a day or on consecutive days.
- ✓ Wash treated clothing before wearing it again.
- ✓ If you suspect that you or your child are reacting to an insect repellent, stop using it, wash treated skin, and then call your local poison control center. If/when you go to a doctor, take the repellent with you.



Never use agricultural pesticides in the home

Using farm pesticides in the home is dangerous and illegal. These chemicals are not designed to be used where people will be directly exposed. Farm pesticides properly used outdoors are broken down by sunlight, rain, and bacteria. Indoors, farm pesticides may last for years. You, your family, and pets may be harmed by pesticides misused indoors by swallowing them, breathing them in, or touching them with your skin.

When used indoors, farm pesticides can cause serious health problems including:

DIZZINESS

**BLURRED
VISION**

**DIFFICULTY
BREATHING**

**WEAKNESS
AND POOR
COORDINATION**

**VOMITING
AND DIARRHEA**

DEATH

HEADACHES

**CONFUSION AND
MEMORY LOSS**



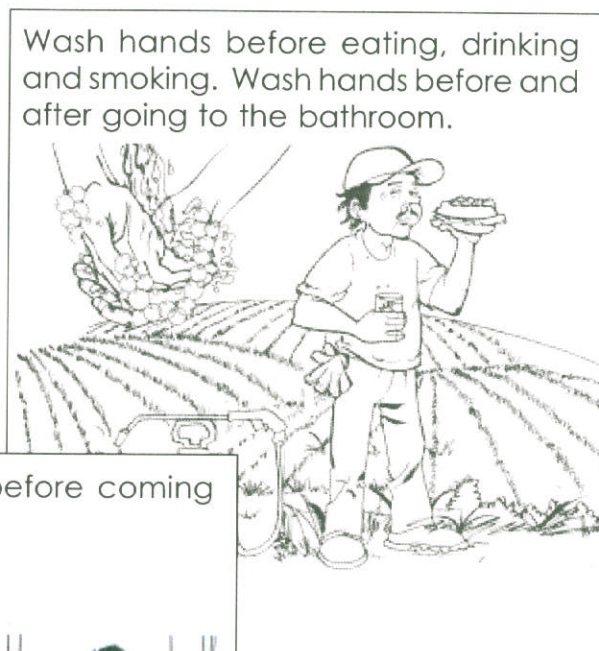
It is also against the law to misuse pesticides. You must follow the label instructions and never use a pesticide that does not have a label.

WORKING WITH PESTICIDES IN AGRICULTURE

*If we work with pesticides...
How do we protect ourselves and our families?*



Wear protective clothing.

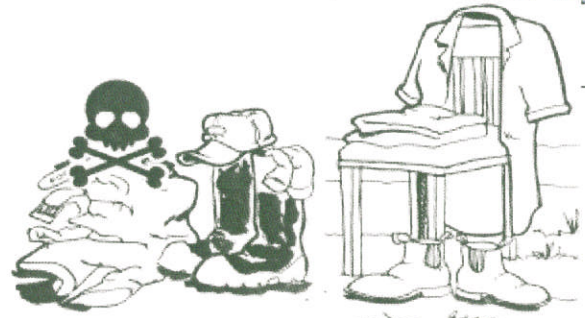


Wash hands before eating, drinking and smoking. Wash hands before and after going to the bathroom.

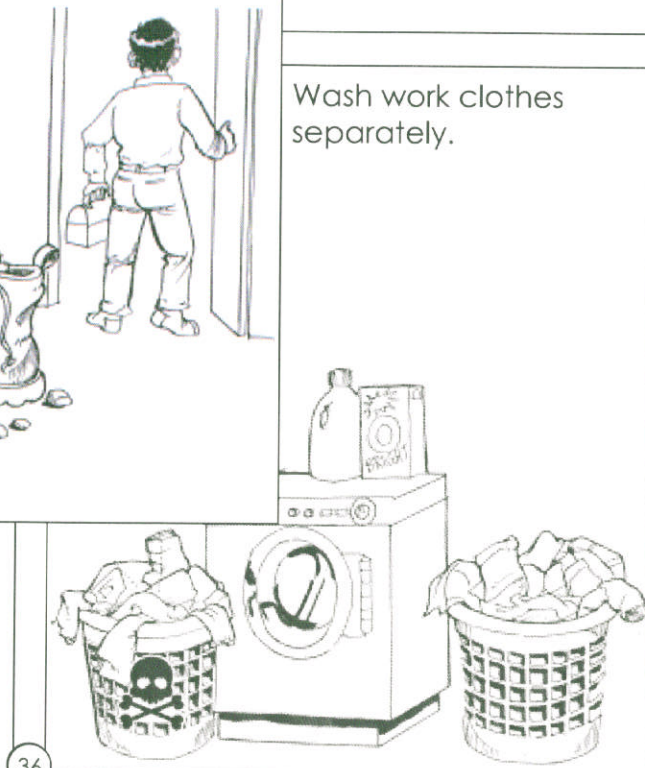
Take shoes off before coming into the house.



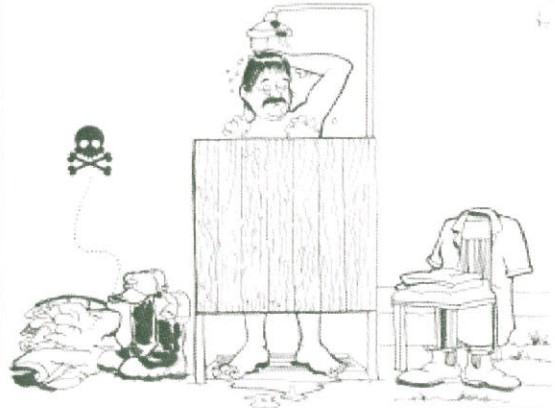
Change clothes after working with pesticides or in fields that have been sprayed with pesticides.



Wash work clothes separately.



Shower (if possible) immediately after working with pesticides or in areas where they have been applied.



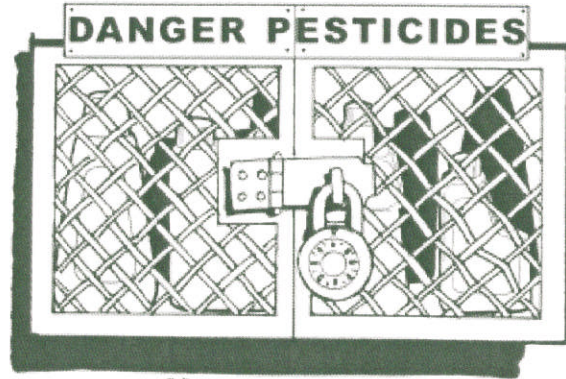
Keep out of recently treated fields until the allowed time of entry.



Never use pesticide containers for anything else.



Keep pesticides and other chemicals out of the reach of children.



Never take pesticides home from work.



What is the Worker Protection Standard or WPS for farmworkers?

You can ask if anyone in the family is a farmworker or farmer, or works in landscaping, greenhouses, nurseries or on a golf course. Or if they know someone who works around pesticides. If the answer is yes, you can ask how they protect themselves and their families. You can share with them basic safety information and recommendations from the WPS.



The Worker Protection Standard (WPS)

The Worker Protection Standard (WPS) is a federal law designed to protect the health of farmworkers and pesticide handlers.

Its requirements include:

Protection during applications

Applicators are prohibited from applying a pesticide in a way that will expose workers or other persons.

Workers are kept away while pesticides are being applied.

Restricted-entry intervals

Restricted-entry intervals must be specified on all agricultural plant pesticide product labels. Workers are not allowed to enter a pesticide treated area during the restricted entry interval, with a few exceptions.

Personal protective equipment

Personal protective equipment must be provided and maintained for handlers and early-entry workers.

Notification of workers

Workers must be notified about treated areas so they may avoid exposure.

Decontamination supplies

Handlers and workers must have an ample supply of water, soap, and towels for routine washing and emergency decontamination.



Emergency assistance

Transportation to a medical care facility must be made available if a worker or handler may have been poisoned or injured.

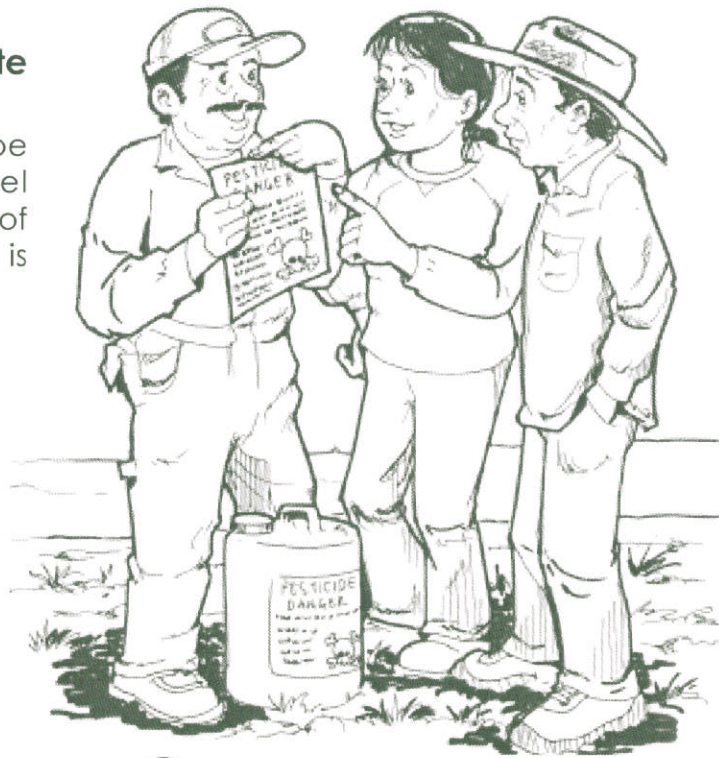


Pesticide safety training and safety posters

Training is required for all workers and handlers, and a pesticide safety poster must be displayed.

Access to labeling and site specific information

Handlers and workers must be informed of pesticide label requirements. Central posting of recent pesticide applications is required.



GLOSSARY

Active Communication

When you listen carefully and choose the best way to EXCHANGE information and knowledge with the family.

Active Ingredient

The part of the pesticide that kills the target pests. The active ingredient is usually combined with other substances.

Acute

Immediate. The health effects of an acute pesticide poisoning generally happen within the first few hours to one day of being exposed. An acute pesticide poisoning is generally a one-time exposure that causes immediate sickness.

Dose – Time Relationship

The amount (how much) and the length of time (how long) to which a person is exposed to a chemical or pesticide. How much of a pesticide a person is exposed to and for how long a person is exposed affects whether or not a person can get sick from pesticides.

Chronic

Long-term. The health effects of a chronic or long term pesticide exposure usually happen after repeated exposure to relatively low amounts of the pesticide over a long period of time.

Excretion

The bodily process that gets rid of waste.

Fungicide

A type of pesticide used to kill or control fungus.

Herbicides

A type of pesticide used to kill or control weeds. Herbicides are the most common type of pesticide used.

Insecticides

A type of pesticide used to kill or control insects.

Metabolism

The chemical processes that are needed to stay alive. In metabolism some substances are broken down to give energy for vital processes, and other substances are synthesized or put together in order to live.

Inert or Inactive Ingredient

The substance added to a pesticide or mixed with the active ingredient to help apply the pesticide or improve the performance of a pesticide. Water, kerosene, and chlorinated solvents are commonly used as inert ingredients. Typically, the inert ingredients are not known as they are considered a "trade secret."

Routes of Entry

How chemicals get into the body. There are three routes of entry or ways that pesticides can get into the body—skin, nose and mouth.

Personal Protective Equipment (PPE)

The type of clothing and gear that must be worn by certain workers dealing with pesticides. In many instances the employer is responsible for providing PPE to the workers. The type of equipment varies depending on the chemical and the label, but most often includes wearing a long-sleeved shirt, long pants, gloves, hat and boots. Often PPE includes chemical resistant clothing, boots and a mask.

Pesticides

Chemicals used to control or kill "pests"—insects, rodents and weeds that may be harmful to our health or to our crops. While pesticides may help get rid of unwanted pests, they can also be harmful to plants, animals and people. Pesticides are used in and around the home, in schools, in offices, in the community and in agriculture.

Restricted Entry Intervals (REI)

The amount of time that workers are "restricted" or not allowed to work or enter the fields after it has been sprayed or treated with pesticides.

Rodenticides

A type of pesticide used to kill or control rats, mice and other rodents.

Tolerance

The ability of an animal or plant to withstand single or repeated doses of a potentially harmful chemical without a bad effect.

Toxic

The ability of a substance to produce or cause injury. Not all pesticides are the same and some are less toxic than others.

SOURCES

Center for Environmental Resource Management, University of Texas at El Paso, *Agua Para Beber: A Training Manual for Community Volunteers in Hygiene Education and Water Purification Techniques*, (El Paso: Center for Environmental Resource Management, 1995).

Center for Environmental Resource Management, University of Texas at El Paso, *Environmental Health and Justice Training Manual: A Community Guide to Understanding the Environment*, (El Paso: Center for Environmental Resource Management, 1999).

Conant, Jeff, "Pesticides are Poison" in *Community Guide to Environmental Health* (Berkeley, CA: Hesperian Foundation, forthcoming).

EPA, *Protect Yourself from Pesticides—Guide for Agricultural Workers* (March 1994).

EPA, www.epa.gov/pesticides/food/pest.htm

EPA, www.epa.gov/ebtpages/pestpesticidetype.htm#subtopics

Farmworker Justice, *Project Clean Environment for Healthy Kids Training Manual*, (Washington, DC: Farmworker Justice, 2003).

Landrigan, Phillip, "Pesticides and PCBs: Does the evidence show that they threaten children's health." *Contemporary Pediatrics*, 2001:18 (2): 110-124.

Liebman, Amy K., Patricia Juárez, Salvador Saenz, *Aunque Cerca...Sano Training Manual*, (Austin, TX: Migrant Clinicians Network, 2004).

Ottoboni, Alice M. *The Dose Makes the Poison: a Plain Language Guide to Toxicology*, 2nd Edition (New York: John Wiley and Sons, 1997).

Wake Forest University, The Department of Family and Community Medicine, *Send Pests Packing/Digale Adios a las Plagas*, (Winston-Salem: Wake Forest University, 2003).

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